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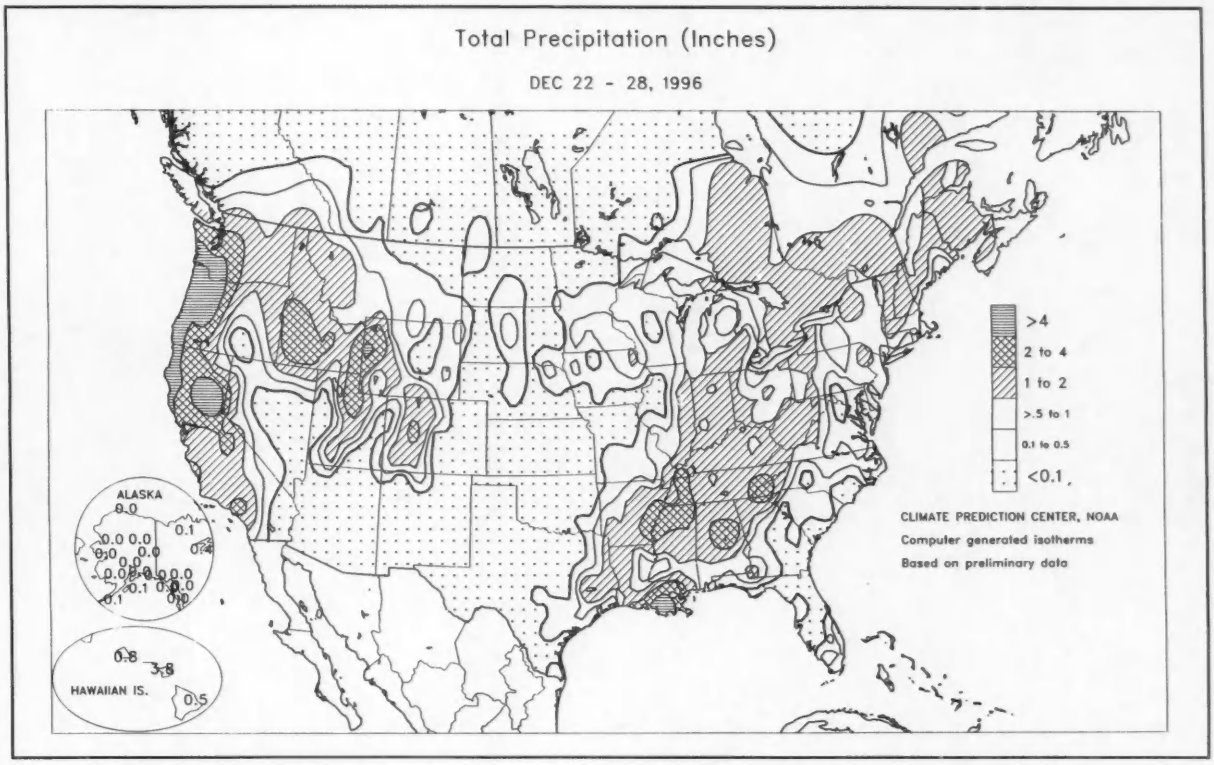
WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



HIGHLIGHTS

December 22 - 28, 1996

The **Northwest's** wet spell gained momentum in its 11th week, boosting monthly precipitation above 30 inches in parts of the **Sierra Nevada** and dumping heavy snow and freezing rain from **western Washington** and **northern Oregon** to the **northern Rockies.** Despite the Pacific storm fusillade, frigid air clung stubbornly at ground level in the **Northwestern and North-Central States.** Temperatures failed to rise to 0°F during the week in the **northernmost Plains,** and averaged up to 35°F below normal in **Montana.** Unlike last week, the arctic air dealt only a glancing blow to the **South** and **East,** as weekly temperatures rebounded to 3 to 10°F above normal. On the **central High Plains,** however, winter wheat was briefly exposed to near-zero cold. Elsewhere, snow blanketed the **upper Midwest** and **western Great Lakes States,** while rain dampened areas from the **central Gulf Coast** into the **Northeast.** At week's end, another major storm arrived in the **Northwest.**

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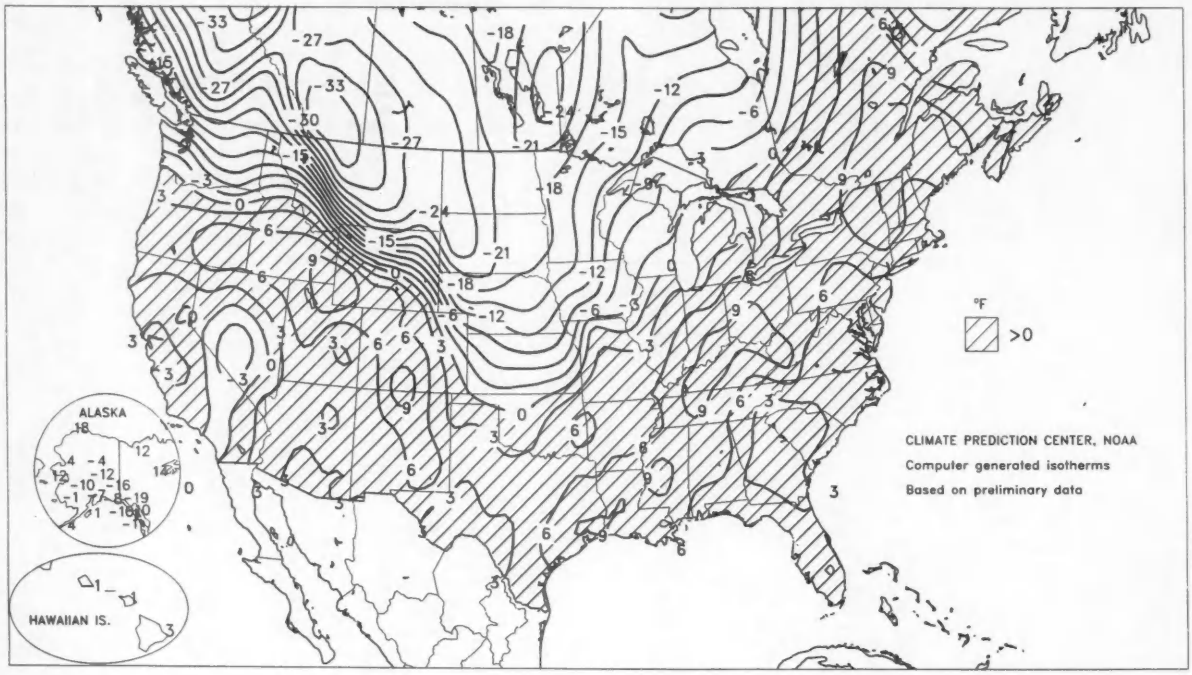
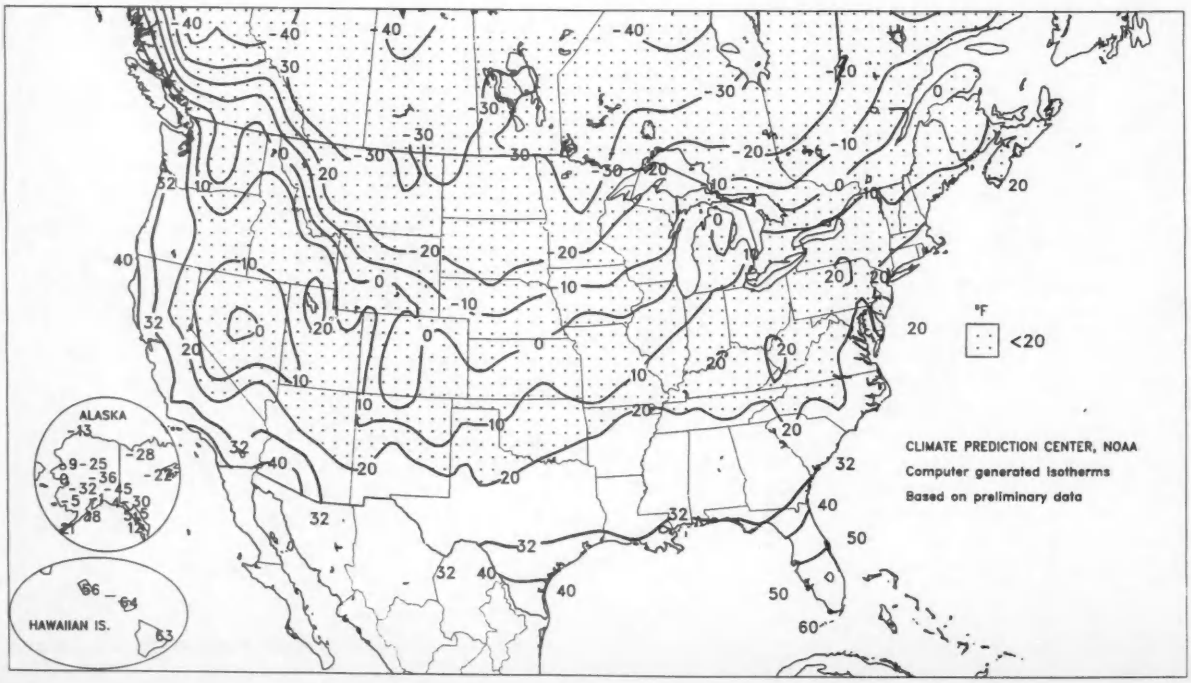
Departure of Average Temperature from Normal (°F)

DEC 22 - 28, 1996



Extreme Minimum Temperature (°F)

DEC 22 - 28, 1996



National Weather Data for Selected Cities

Weather Data for the Week Ending December 28, 1996

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP, °F		PRECIP.	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.06 INCH OR MORE
AL	BIRMINGHAM	61	40	69	24	50	7	1.47	0.28	0.63	3.13	68	62.58	115	84	47	0	3	3	1
	MOBILE	67	44	76	29	56	4	0.84	-0.37	0.51	4.43	92	60.61	95	94	58	0	1	3	1
	MONTGOMERY	63	37	71	25	50	4	0.88	-0.32	0.32	4.23	91	63.11	115	89	56	0	3	4	0
AK	ANCHORAGE	16	1	23	-1	9	-7	0.00	-0.25	0.00	0.23	23	14.45	91	83	61	0	7	0	0
	BARROW	12	-1	19	-13	5	18	0.00	-0.03	0.00	0.03	27	3.51	81	87	79	0	7	0	0
	FAIRBANKS	-15	-27	-5	-36	-21	-12	0.00	-0.18	0.00	0.46	61	11.40	105	74	68	0	7	0	0
	JUNEAU	21	11	25	5	16	-10	–	–	–	–	–	–	–	69	33	0	7	-	-
	KODIAK	36	26	39	18	31	1	0.08	-1.54	0.05	6.38	104	55.20	82	71	52	0	6	2	0
	NOME	30	6	39	0	18	12	0.00	-0.19	0.00	0.57	74	16.24	108	74	44	0	7	0	0
AZ	PHOENIX	66	44	70	39	55	2	0.00	-0.22	0.00	0.00	0	4.27	58	53	18	0	0	0	0
	PRESCOTT	50	28	54	19	39	–	0.00	-0.36	0.00	0.24	17	7.22	37	72	25	0	4	0	0
	TUCSON	67	39	70	32	53	3	0.00	-0.25	0.00	0.00	0	10.49	88	53	17	0	1	0	0
	YUMA	69	49	72	42	59	4	0.00	-0.11	0.00	0.00	0	0.93	30	69	21	0	0	0	0
AR	FORT SMITH	55	34	73	18	45	7	0.48	-0.13	0.39	1.83	66	57.00	140	89	61	0	3	2	0
	LITTLE ROCK	–	–	–	–	–	–	1.24	0.28	–	3.29	76	51.23	105	–	–	-	-	-	-
CA	BAKERSFIELD	56	41	62	35	49	2	0.75	0.61	0.37	1.57	285	8.41	149	96	41	0	0	3	0
	EUREKA	57	47	60	41	52	4	2.36	1.04	0.63	16.92	310	58.22	151	90	68	0	0	7	3
	FRESNO	54	40	60	33	47	3	0.84	0.50	0.61	3.31	261	15.31	147	97	60	0	0	3	1
	LOS ANGELES	64	51	72	48	58	1	1.82	1.42	1.49	4.83	326	16.85	142	92	50	0	0	3	1
	REDDING	53	41	56	33	47	3	1.47	0.19	0.78	6.44	130	39.22	119	96	69	0	0	5	1
	SACRAMENTO	55	43	61	34	49	5	1.89	1.29	–	5.13	–	23.65	138	98	66	0	0	-	-
	SAN DIEGO	63	51	67	45	57	1	0.17	-0.19	0.09	0.62	43	7.17	73	95	41	0	0	4	0
	SAN FRANCISCO	57	47	60	41	52	3	1.05	0.29	0.75	6.16	223	27.80	143	94	62	0	0	3	1
CO	DENVER	48	18	60	2	33	4	0.00	-0.14	0.00	0.05	8	8.11	53	79	30	0	6	0	0
	GRAND JUNCTION	41	23	50	13	32	4	0.40	0.26	0.27	0.50	81	9.82	95	82	53	0	7	3	0
	PUEBLO	50	18	64	6	34	4	0.00	-0.08	0.00	0.27	69	13.07	117	83	32	0	6	0	0
CT	BRIDGEPORT	45	31	55	26	38	7	0.39	-0.38	0.39	5.97	188	55.70	134	86	54	0	5	1	0
	HARTFORD	43	27	59	20	35	8	0.53	-0.32	0.53	5.45	154	54.61	124	84	54	0	5	1	1
DC	WASHINGTON	50	34	62	27	42	5	0.28	-0.41	0.19	5.40	191	50.91	132	80	55	0	3	3	0
FL	PANAMA CITY	69	48	73	34	57	6	–	–	–	–	–	–	–	96	62	0	0	-	-
	DAYTONA BEACH	74	54	78	47	64	5	0.07	-0.51	0.07	1.98	86	60.48	127	99	65	0	0	1	0
	JACKSONVILLE	69	47	77	36	58	2	0.01	-0.68	0.01	3.24	124	58.12	114	97	59	0	0	1	0
	KEY WEST	79	67	80	64	73	2	0.00	-0.44	0.00	1.37	75	38.70	98	91	65	0	0	0	0
	MIAMI	79	65	82	60	72	4	0.09	-0.32	0.09	1.02	61	55.15	99	97	58	0	0	1	0
	ORLANDO	76	54	80	47	65	4	0.00	-0.48	0.00	2.14	110	56.35	117	99	58	0	0	0	0
	TALLAHASSEE	71	43	76	26	57	5	0.19	-0.97	0.19	6.12	134	53.72	82	93	57	0	1	1	0
	TAMPA	76	55	79	46	65	4	0.00	-0.49	0.00	2.12	108	45.98	105	98	62	0	0	0	0
	WEST PALM BEACH	78	64	81	57	71	4	0.23	-0.27	0.14	1.07	52	39.35	67	88	57	0	0	3	0
GA	ATLANTA	57	35	66	27	46	4	0.64	-0.37	0.38	2.90	74	43.17	86	86	54	0	3	2	0
	AUGUSTA	61	32	76	20	46	1	0.15	-0.69	0.10	2.06	67	35.31	79	95	54	0	4	3	0
	MACON	62	34	71	20	48	1	0.19	-0.65	0.15	3.22	83	36.40	82	94	58	0	4	3	0
	SAVANNAH	67	41	77	29	54	4	0.00	-0.73	0.00	2.71	102	32.66	67	96	56	0	1	0	0
HI	HILO	82	68	87	63	75	3	0.47	-2.01	0.45	5.83	53	120.51	94	92	64	0	0	2	0
	HONOLULU	80	68	82	58	73	-1	0.98	0.10	0.38	1.84	52	32.92	151	91	65	0	0	4	0
	KAHULUI	80	67	84	64	74	1	3.84	3.03	3.23	7.41	252	25.13	122	93	70	0	0	3	2
	LIHUE	–	63	–	55	–	–	–	–	–	–	–	–	–	94	67	-	-	-	-
ID	BOISE	41	31	47	18	36	8	1.20	0.90	0.65	2.60	213	13.15	110	96	75	0	4	4	1
	LEWISTON	33	23	41	16	28	-5	0.97	0.69	0.60	1.69	154	17.54	141	96	74	0	7	4	1
	POCATELLO	36	27	41	14	31	9	1.12	0.87	0.38	2.31	233	12.70	108	93	67	0	4	6	0
IL	CHICAGO	32	19	52	1	26	2	0.29	-0.20	0.22	1.15	51	31.09	87	92	73	0	6	3	0
	MOLINE	26	13	40	0	19	-3	0.09	-0.37	0.09	0.69	34	26.42	69	92	78	0	7	1	0
	PEORIA	34	15	54	3	25	3	0.49	-0.01	0.49	1.06	48	27.87	77	89	70	0	5	1	0
	QUINCY	33	19	52	5	26	0	–	–	–	–	–	–	–	94	72	0	5	-	-
	ROCKFORD	27	15	39	-2	21	1	0.38	-0.03	0.28	2.11	113	42.85	118	96	76	0	7	2	0
	SPRINGFIELD	39	22	59	7	31	4	0.42	-0.15	0.42	0.70	28	30.21	86	88	63	0	5	1	0
IN	EVANSVILLE	49	32	68	18	40	8	1.08	0.29	1.04	3.49	102	60.26	132	90	56	0	3	3	1
	FORT WAYNE	37	25	53	10	31	6	1.11	0.50	1.08	3.20	122	43.89	127	96	75	0	4	2	1
	INDIANAPOLIS	44	30	63	15	37	9	1.08	0.38	1.00	2.32	76	52.02	132	88	59	0	4	4	1
	SOUTH BEND	35	20	52	4	27	1	1.20	0.60	1.12	2.42	81	42.53	109	93	75	0	4	2	1
IA	DES MOINES	18	4	32	-4	11	-10	0.04	-0.24	0.02	0.51	41	34.21	101	91	74	0	7	3	0
	SIOUX CITY	9	-3	22	-9	3	-16	0.00	-0.17	0.00	0.15	21	31.79	123	81	74	0	7	0	0
	WATERLOO	20	0	35	-12	10	-7	0.31	0.06	0.19	0.67	68	29.38	87	94	75	0	7	3	0
KS	CONCORDIA	26	6	51	0	16	-11	0.00	-0.17	0.00	0.07	9	26.20	91	86	60	0	7	0	0
	DODGE CITY	42	12	66	3	27	-4	0.00	-0.14	0.00	0.00	0	32.43	151	83	40	0	7	0	0
	GOODLAND	36	8	62	-5	23	-5	0.00	-0.08	0.00	0.04	11	19.17	106	83	46	0	7	0	0
	TOPEKA	31	13	47	3	22	-6	0.00	-0.29	0.00	0.02	2	36.66	104	88	66	0	7	0	0
	WICHITA	37	17	49	6	27	-4	0.00	-0.26	0.00	0.04	3	29.14	75	87	56	0	7	0	0
KY	BOWLING GREEN	54	34	69	18	44	9	0.37	-0.72	0.15	2.69	63	58.24	111	90	55	0	3	4	0
	LEXINGTON	51	33	66	18	42	9	1.02	0.16	0.48	4.98	138	53.33	120	86	55	0	3	5	0
	LOUISVILLE	53	36	68	21	45	11	1.08	0.30	1.06	4.23	128	47.82	108	86	62	0	3	3	1
LA	BATON ROUGE	68	47	75	28	58	7	0.49	-0.77	0.31	1.28	26	58.91	97	96	60	0	1	3	0
	LAKE CHARLES	66	51	74	31	59	8	0.17	-0.98	0.14	1.75	38	52.75	97	94	56	0	1	2	0
	NEW ORLEANS	69	50	76	35	59	6	2.44	1.14	2.05	2.86	55	50.27	82	93	61	0	0	3	1
	SHREVEPORT	61	44	76	26	52	7	0.76	-0.32	0.40	2.03	47	44.56	91	91	62	0	2	2	0

Based on 1961-90 normals

Weather Data for the Week Ending December 28, 1996

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP, °F		PRECIP.	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.05 INCH OR MORE
ME	CARIBOU	30	13	43	4	22	11	1.16	0.48	0.97	3.38	116	38.47	106	92	68	0	7	6	1
	PORTLAND	40	24	62	16	32	9	0.50	-0.45	0.40	5.98	145	54.15	123	87	60	0	7	4	0
MD	BALTIMORE	47	27	61	17	37	3	0.26	-0.49	0.22	6.84	223	55.41	137	88	53	0	6	2	0
	SALISBURY	53	30	66	17	41	4	0.94	0.09	0.48	5.79	174	55.56	123	95	49	0	4	3	0
MA	BOSTON	45	31	61	26	38	7	0.39	-0.48	0.35	5.57	153	50.75	123	79	50	0	4	2	0
	CHATHAM	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
MI	ALPENA	30	15	43	-1	22	2	0.70	0.26	0.53	4.30	234	28.85	101	95	72	0	7	6	1
	DETROIT	38	25	50	14	31	6	0.85	0.28	0.76	2.50	97	25.60	79	94	73	0	5	3	1
	FLINT	35	19	48	0	27	3	0.93	0.50	0.76	2.03	105	25.28	84	93	76	0	5	3	1
	GRAND RAPIDS	33	20	50	7	27	2	0.52	-0.05	0.28	2.23	86	26.88	75	92	76	0	6	4	0
	HOUGHTON LAKE	29	13	41	-7	21	2	0.44	0.03	0.38	2.13	120	33.91	121	94	74	0	7	4	0
	LANSING	35	18	50	-3	27	4	1.01	0.59	0.85	2.52	135	28.45	91	96	71	0	4	2	1
	MARQUETTE	23	2	60	-16	12	-2	1.53	0.96	0.65	4.39	186	42.42	121	90	74	0	7	5	2
	MUSKEGON	33	22	48	12	27	1	0.66	0.01	0.29	1.86	68	26.23	81	95	79	0	6	6	0
	SAULT ST. MARIE	22	6	31	-10	14	-2	1.30	0.69	0.76	3.70	142	42.67	125	89	72	0	7	6	1
MN	ALEXANDRIA	0	-12	9	-24	-6	-15	–	–	–	–	–	–	–	87	69	0	7	-	-
	DULUTH	6	-10	17	-23	-2	-11	0.08	-0.22	0.05	0.19	17	35.81	120	83	68	0	7	2	0
	INT'L FALLS	-3	-20	9	-37	-12	-15	0.07	-0.12	0.07	0.76	99	27.83	114	77	64	0	7	1	0
	MINNEAPOLIS	10	-6	23	-27	2	-12	0.76	0.54	0.53	1.68	173	25.90	92	86	67	0	7	3	1
	ROCHESTER	13	-3	29	-14	5	-9	0.39	0.19	0.27	[illegible]0	129	29.58	100	89	73	0	7	4	0
MS	GREENWOOD	62	44	73	24	53	9	–	–	–	–	–	–	–	91	56	0	3	-	-
	JACKSON	65	43	73	28	54	9	1.15	-0.28	0.86	2.86	51	54.60	100	90	60	0	3	4	1
	MERIDIAN	64	42	74	25	53	6	0.93	-0.45	0.56	2.63	48	54.65	97	91	59	0	3	3	1
MO	CAPE GIRARDEAU	47	31	63	18	39	6	0.36	-0.57	0.27	2.84	71	41.88	91	94	69	0	3	2	0
	COLUMBIA	42	20	61	5	31	3	0.00	-0.52	0.00	0.39	16	36.88	101	93	65	0	5	0	0
	KANSAS CITY	31	12	47	2	21	-6	0.00	-0.33	0.00	0.03	2	32.53	87	89	69	0	7	0	0
	SAINT LOUIS	46	25	66	9	35	4	0.36	-0.25	0.35	0.88	32	42.70	114	89	64	0	6	2	0
	SPRINGFIELD	49	26	67	7	37	5	0.30	-0.22	0.20	0.70	28	42.02	97	93	59	0	5	2	0
MT	BILLINGS	1	-10	22	-20	-4	-28	0.04	-0.15	0.02	0.10	14	11.91	79	84	75	0	7	2	0
	GLASGOW	-5	-19	0	-38	-12	-24	0.11	0.03	–	0.31	94	10.21	94	79	65	0	7	-	-
	GREAT FALLS	-7	-20	-3	-26	-13	-35	0.19	-0.01	0.13	0.37	49	9.31	61	81	65	0	7	4	0
	HAVRE	-6	-22	0	-30	-14	-29	0.03	-0.11	0.02	0.09	17	10.81	97	77	60	0	7	2	0
	HELENA	3	-12	9	-26	-5	-24	0.36	0.22	0.13	0.40	74	9.72	84	80	64	0	7	4	0
	KALISPELL	10	-1	14	-9	4	-16	0.47	0.08	0.11	2.40	154	24.86	152	83	67	0	7	6	0
	MILES CITY	-1	-14	5	-26	-8	-24	0.18	0.04	0.07	0.34	62	13.28	95	86	66	0	7	4	0
	MISSOULA	22	10	33	3	16	-6	2.05	1.77	0.67	3.30	317	17.97	134	96	62	0	7	6	2
NE	GRAND ISLAND	17	1	46	-6	9	-14	0.00	-0.14	0.00	0.03	5	30.99	125	84	68	0	7	0	0
	LINCOLN	19	3	41	-2	11	-12	0.02	-0.15	0.02	0.21	26	35.96	127	90	66	0	7	1	0
	NORFOLK	10	-2	27	-9	4	-16	0.11	-0.04	0.10	0.29	43	25.59	102	80	70	0	7	2	0
	NORTH PLATTE	21	2	45	-7	12	-10	0.02	-0.07	0.02	0.02	5	24.77	129	84	65	0	7	1	0
	OMAHA	18	5	34	-3	12	-11	0.00	-0.20	0.00	0.32	35	31.52	106	83	71	0	7	0	0
	SCOTTSBLUFF	29	5	54	-11	17	-7	0.17	0.06	0.06	0.21	40	16.52	109	88	59	0	6	4	0
	VALENTINE	12	-9	35	-25	2	-21	0.09	-0.01	0.09	0.11	23	16.99	76	83	68	0	7	1	0
NV	ELY	38	14	47	0	26	2	0.25	0.08	0.25	0.32	48	7.20	71	83	52	0	7	1	0
	LAS VEGAS	57	39	64	31	48	4	0.02	-0.06	0.02	0.02	6	1.82	45	64	23	0	1	1	0
	RENO	41	22	49	10	32	0	0.48	0.26	0.24	2.27	258	11.34	153	92	53	0	5	3	0
	WINNEMUCCA	37	21	45	0	29	1	0.56	0.37	0.31	2.88	360	10.52	128	88	63	0	4	3	0
NH	CONCORD	37	21	50	13	29	8	0.83	0.17	0.63	5.45	190	45.30	125	86	58	0	7	3	1
NJ	ATLANTIC CITY	47	27	57	15	37	4	0.79	0.05	0.38	6.57	219	50.87	127	87	56	0	6	3	0
NM	ALBUQUERQUE	51	28	58	22	40	6	0.00	-0.11	0.00	0.00	0	9.76	110	50	21	0	5	0	0
	CLOVIS	58	25	64	16	41	5	–	–	–	–	–	–	–	74	22	0	5	-	-
	ROSWELL	66	33	66	23	49	10	–	–	–	–	–	–	–	52	17	0	3	-	-
NY	ALBANY	39	25	49	16	32	9	0.16	-0.46	0.16	3.84	144	43.19	120	83	62	0	6	1	0
	BINGHAMTON	35	24	46	18	30	6	0.35	-0.29	0.27	5.96	219	47.50	129	86	65	0	7	3	0
	BUFFALO	40	25	53	15	32	6	1.22	0.44	0.48	2.85	86	46.96	122	96	69	0	6	6	0
	NEW YORK	47	35	58	28	41	7	0.33	-0.40	0.29	4.27	139	45.55	109	74	50	0	3	3	0
	ROCHESTER	40	25	55	17	32	6	0.38	-0.19	0.27	1.86	75	44.09	139	95	61	0	7	5	0
	SYRACUSE	40	26	53	19	33	8	0.80	0.14	0.33	4.05	140	39.72	102	92	56	0	7	5	0
NC	ASHEVILLE	53	28	63	19	41	3	0.23	-0.75	0.18	3.44	88	46.66	84	91	50	0	5	3	0
	CHARLOTTE	56	34	64	24	45	4	0.11	-0.69	0.11	2.56	82	40.08	94	84	48	0	3	1	0
	GREENSBORO	52	30	61	19	41	3	0.54	-0.23	0.44	3.78	124	50.69	119	91	57	0	4	2	0
	HATTERAS	58	40	61	33	49	2	0.30	-0.76	0.23	4.29	105	41.56	74	86	61	0	0	3	0
	NEW BERN	61	37	73	26	49	4	0.04	-0.84	0.04	2.27	69	55.30	103	91	45	0	3	1	0
	RALEIGH	56	33	70	19	45	4	0.70	-0.04	0.51	2.83	97	57.47	139	91	52	0	4	2	1
	WILMINGTON	62	37	69	25	50	5	0.04	-0.94	0.04	2.66	73	64.17	113	96	56	0	4	1	0
ND	BISMARCK	-4	-15	6	-27	-10	-20	0.21	0.10	0.10	0.65	148	20.62	134	74	60	0	7	4	0
	FARGO	-4	-16	9	-28	-10	-18	0.00	-0.16	0.00	0.19	33	13.07	67	76	63	0	7	0	0
	GRAND FORKS	-5	-18	7	-24	-11	-18	0.04	-0.12	0.02	0.71	125	16.66	91	81	61	0	7	2	0
	WILLISTON	-7	-20	0	-32	-13	-24	0.13	-0.01	0.09	1.05	198	13.33	98	78	63	0	7	3	0
OH	AKRON-CANTON	43	27	60	17	35	7	0.86	0.03	0.45	3.96	147	42.05	115	94	63	0	5	3	0
	CINCINNATI	49	32	65	18	40	10	1.21	0.54	1.15	3.17	111	51.13	124	89	58	0	3	3	1
	CLEVELAND	43	28	58	17	36	7	0.51	-0.13	0.29	2.87	102	46.17	127	90	57	0	5	5	0
	COLUMBUS	46	30	63	18	38	11	0.93	0.32	0.79	3.33	122	46.37	123	91	61	0	4	3	1
	DAYTON	46	30	63	18	38	10	1.00	0.38	0.96	3.48	130	51.72	142	91	63	0	4	2	1

Based on 1961-90 normals

Weather Data for the Week Ending December 28, 1996

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP, °F		PRECIP.	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.05 INCH OR MORE
	TOLEDO	39	26	52	14	32	7	0.57	-0.04	0.51	2.54	96	29.56	90	96	74	0	4	4	1
	YOUNGSTOWN	42	26	58	15	34	7	0.42	-0.20	0.32	2.67	100	40.91	110	92	64	0	5	2	0
OK	OKLAHOMA CITY	53	26	68	14	39	2	0.00	-0.28	0.00	0.00	0	37.90	114	77	43	0	5	0	0
	TULSA	53	27	69	12	40	4	0.00	-0.42	0.00	0.10	5	31.20	77	81	43	0	5	0	0
OR	ASTORIA	49	38	54	32	43	2	6.54	4.17	2.68	14.78	155	67.24	133	99	73	0	1	7	2
	BURNS	39	28	43	14	33	10	0.76	0.51	0.29	2.69	254	13.63	138	97	76	0	5	5	0
	MEDFORD	47	30	54	34	43	6	1.30	0.58	0.56	7.69	255	29.09	156	97	81	0	0	5	1
	PENDLETON	35	20	44	9	28	-5	0.44	0.08	0.15	1.44	99	13.74	115	96	72	0	7	6	0
	PORTLAND	46	34	52	30	40	0	2.71	1.34	0.91	8.89	160	57.82	161	93	75	0	3	7	1
	SALEM	48	36	53	29	42	3	3.66	2.16	0.90	11.09	190	63.23	163	98	78	0	2	7	4
PA	ALLENTOWN	42	25	54	16	34	5	0.75	0.00	0.75	7.09	225	56.25	130	92	55	0	6	1	1
	ERIE	43	28	57	19	36	7	0.39	-0.34	0.30	1.35	41	48.11	116	93	66	0	5	3	0
	HARRISBURG	–	–	–	–	–	–	0.27	-0.43	–	5.85	198	52.30	130	–	–	-	-	-	-
	PHILADELPHIA	46	31	63	24	39	7	0.59	-0.21	0.57	8.71	264	53.99	118	81	53	0	4	2	1
	PITTSBURGH	45	29	61	19	37	8	0.28	-0.38	0.14	1.90	72	44.48	121	90	60	0	4	4	0
	SCRANTON	39	27	50	18	33	6	0.57	0.05	0.52	5.08	223	48.17	134	78	60	0	7	2	1
RI	PROVIDENCE	46	28	59	23	37	7	0.60	-0.36	0.48	6.53	164	48.72	108	86	49	0	5	3	0
SC	CHARLESTON	65	40	73	30	53	3	0.03	-0.73	0.02	2.12	75	39.21	76	91	54	0	1	2	0
	COLUMBIA	59	32	75	19	46	1	0.21	-0.67	0.13	2.32	72	33.24	67	95	51	0	4	3	0
	FLORENCE	60	36	73	23	48	3	–	–	–	–	–	–	–	96	48	0	3	-	-
	GREENVILLE	54	34	62	22	44	2	0.10	-0.86	0.07	3.84	102	51.20	100	87	52	0	3	3	0
SD	ABERDEEN	-2	-14	8	-27	-8	-20	0.25	0.14	0.13	0.80	174	25.06	119	80	66	0	7	3	0
	HURON	1	-10	11	-23	-4	-19	0.00	-0.09	0.00	0.20	47	18.43	92	77	69	0	7	0	0
	RAPID CITY	6	-10	24	-23	-2	-24	0.00	-0.11	0.00	0.99	225	19.97	120	83	72	0	7	0	0
	SIOUX FALLS	4	-7	18	-19	-2	-17	0.09	-0.06	0.07	0.78	122	20.13	85	84	73	0	7	2	0
TN	CHATTANOOGA	53	33	65	22	43	4	0.99	-0.17	0.48	3.12	67	54.39	102	88	59	0	4	4	0
	KNOXVILLE	52	30	65	22	41	3	0.73	-0.31	0.59	3.10	75	48.85	104	97	66	0	5	5	1
	MEMPHIS	55	39	68	24	47	5	2.58	1.39	1.53	6.22	119	75.76	146	90	62	0	3	3	2
	NASHVILLE	56	36	68	19	46	8	0.15	-0.85	0.07	4.01	96	48.37	103	85	58	0	3	3	0
TX	ABILENE	62	32	77	21	47	3	0.00	-0.22	0.00	0.00	0	27.76	114	90	28	0	5	0	0
	AMARILLO	55	24	70	10	39	4	0.00	-0.09	0.00	0.05	14	20.57	106	66	26	0	5	0	0
	AUSTIN	65	44	78	32	55	5	0.04	-0.36	0.04	2.16	127	28.25	89	88	50	0	2	1	0
	BEAUMONT	70	53	77	33	62	9	0.11	-0.98	0.07	1.16	27	47.10	83	97	63	0	0	2	0
	BROWNSVILLE	72	56	81	46	64	3	0.11	-0.19	0.06	0.74	66	28.68	106	95	70	0	0	2	0
	CORPUS CHRISTI	71	50	82	39	61	4	0.08	-0.22	0.08	0.50	44	18.41	61	94	58	0	0	1	0
	DEL RIO	63	38	75	32	51	0	0.01	-0.24	0.01	0.33	33	11.26	46	93	42	0	1	1	0
	EL PASO	61	36	70	30	49	6	0.00	-0.14	0.00	0.00	0	9.11	102	41	17	0	3	0	0
	FORT WORTH	61	35	76	25	48	5	0.00	-0.45	0.00	0.46	24	30.76	83	89	52	0	4	0	0
	GALVESTON	67	54	73	39	61	6	0.40	-0.40	0.37	2.54	80	32.17	76	97	73	0	0	2	0
	HOUSTON	71	52	80	32	61	10	0.49	-0.53	0.19	3.61	83	39.39	73	95	59	0	1	5	0
	LUBBOCK	59	25	73	15	42	3	0.00	-0.11	0.00	0.02	4	13.58	73	84	21	0	6	0	0
	MIDLAND	64	30	75	19	47	3	0.00	-0.11	0.00	0.00	0	9.08	60	90	22	0	5	0	0
	SAN ANGELO	65	33	76	21	49	5	0.00	-0.17	0.00	0.05	7	22.48	110	89	30	0	3	0	0
	SAN ANTONIO	66	45	77	32	55	5	0.04	-0.26	0.04	1.27	94	16.93	64	93	54	0	1	1	0
	VICTORIA	71	52	79	33	62	8	0.08	-0.59	0.05	1.47	55	25.80	57	97	58	0	0	3	0
	WACO	62	38	78	25	50	4	0.00	-0.39	0.00	1.96	117	26.48	83	87	52	0	2	0	0
	WICHITA FALLS	59	28	74	20	44	3	0.00	-0.35	0.00	0.00	0	22.83	79	86	39	0	5	0	0
UT	CEDAR CITY	44	21	48	5	33	4	0.10	-0.04	0.05	0.48	73	12.27	107	92	36	0	8	2	0
	SALT LAKE CITY	48	33	51	27	39	12	0.28	-0.04	0.13	1.73	134	17.33	107	92	38	0	4	5	0
VT	BURLINGTON	37	25	48	14	31	11	0.35	-0.14	0.20	3.57	162	41.73	122	85	62	0	6	2	0
VA	NORFOLK	54	38	70	24	46	5	0.72	-0.06	0.32	3.62	124	51.63	116	92	62	0	2	3	0
	RICHMOND	52	33	65	22	42	5	0.63	-0.21	0.31	4.78	161	54.03	126	83	33	0	3	4	0
	ROANOKE	51	24	61	0	37	1	0.11	-0.54	0.08	2.52	94	51.54	126	83	48	0	6	3	0
WA	QUILLAYUTE	36	30	40	24	33	-7	1.82	-1.84	0.55	11.40	81	94.13	90	98	77	0	5	6	1
	SEATTLE-TACOMA	38	32	44	28	35	-5	1.31	0.00	0.51	5.12	96	46.52	124	97	78	0	4	4	2
	SPOKANE	22	11	31	2	17	-10	0.66	0.13	0.23	2.85	130	23.82	148	97	82	0	7	6	0
	YAKIMA	25	14	31	-7	19	-9	1.07	0.74	–	2.25	174	11.44	148	94	72	0	7	6	0
WV	BECKLEY	51	32	63	20	42	10	0.54	-0.18	0.37	2.48	84	56.56	139	86	54	0	4	3	0
	CHARLESTON	54	33	69	22	43	9	0.90	0.17	0.63	1.48	48	55.22	130	94	60	0	4	4	1
	HUNTINGTON	53	33	68	20	43	10	0.66	-0.11	0.48	1.93	60	49.70	115	88	53	0	4	4	0
	PARKERSBURG	49	30	66	18	40	7	0.55	-0.14	0.32	2.21	84	48.60	120	95	58	0	4	3	0
WI	GREEN BAY	20	4	31	-22	12	-5	0.58	0.29	0.31	1.13	81	24.84	86	91	71	0	7	5	0
	LACROSSE	21	4	32	-10	12	-4	0.45	0.19	–	1.41	119	29.92	96	90	67	0	7	-	-
	MADISON	23	9	36	-7	16	-3	0.89	0.36	0.28	1.29	87	30.06	84	95	77	0	7	5	0
	MILWAUKEE	29	16	39	0	22	1	0.71	0.23	0.50	1.33	63	22.39	68	91	68	0	6	4	1
	WAUSAU	18	3	31	-14	10	-4	0.56	0.28	0.26	1.57	121	35.08	107	78	58	0	7	5	0
WY	CASPER	33	10	45	-8	22	0	0.05	-0.09	0.03	0.42	70	10.48	84	79	51	0	5	2	0
	CHEYENNE	44	14	52	0	29	3	0.00	-0.08	0.00	0.00	0	15.70	110	71	38	0	6	0	0
	LANDER	34	13	48	-1	23	4	0.00	-0.11	0.00	0.17	33	9.01	69	77	63	0	5	0	0
	SHERIDAN	6	-12	36	-28	-3	-24	0.21	0.04	0.17	0.71	108	13.11	91	86	73	0	7	2	0
PR	SAN JUAN	–	74	–	72	–	–	1.11	0.18	–	2.46	60	66.43	132	97	89	-	-	-	-

Based on 1961-90 normals

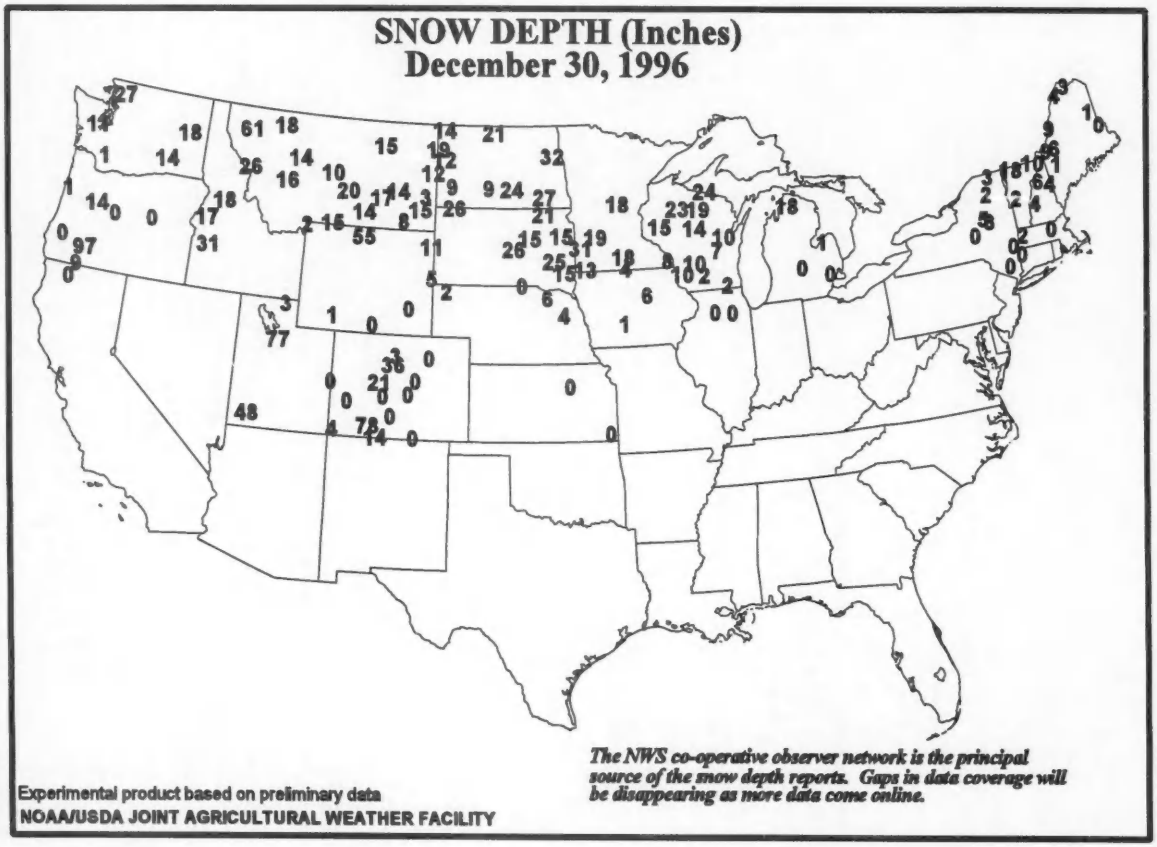
Note: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations have been incomplete.

National Agricultural Summary

December 23 - 29, 1996

HIGHLIGHTS

The Pacific Northwest was overwhelmed by a downpour of moisture that caused significant damage and flooding. Heavy rain followed the record snow that left many farms without electricity. Hurricane-force winds, combined with the freezing rain, threatened ornamental and fruit trees. The excessive rainfall and potential flooding jeopardized vineyards along the Pacific Coast. Most winter wheat in the Northern States was unharmed by the frigid, sub-zero temperatures due to the ample snow cover. Fluctuating temperatures and uneven snow cover in the central Great Plains stressed some exposed winter wheat. Mild weather in Florida aided vegetables recovering from last week's cold snap. Cool nights in Florida's citrus belt prevented new growth.


SNOW DEPTH (Inches)
December 30, 1996
The NWS co-operative observer network is the principal source of the snow depth reports. Gaps in data coverage will be disappearing as more data come online.
Experimental product based on preliminary data
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

International Weather and Crop Summary

December 22 - 28, 1996

HIGHLIGHTS

FSU WESTERN: Patchy snow cover raised some concern for winter grains in northern Ukraine as arctic air engulfed the region.

EUROPE: Unseasonable cold persisted in the north as milder, wet conditions spread across the south.

NORTHWESTERN AFRICA: Heavy rain persisted over Morocco, slowing winter grain planting and causing some flooding.

AUSTRALIA: Dry, warm weather in the main summer crop areas favored growth of sorghum and cotton.

SOUTH ASIA: Seasonable dryness brought relief to flood-stricken rice in southern India, while aiding summer crop harvests elsewhere.

SOUTH AFRICA: Beneficial showers maintained favorable prospects for vegetative corn, except for the extreme west, which has become too dry.

SOUTHEAST ASIA: Drier weather prevailed across Indochina and the Philippines, easing flooding and aiding rice harvesting.

EASTERN ASIA: Warm weather continued to delay winter wheat from entering dormancy across the North China Plain.

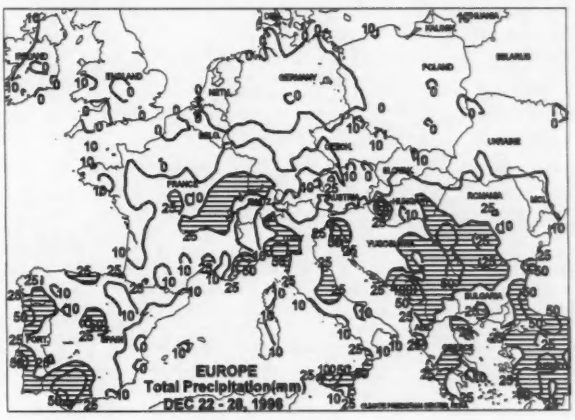
SOUTH AMERICA: Drier, warmer weather favored wheat harvesting and summer crop development across Argentina. Widespread rain continued to maintain adequate soil moisture for soybeans across southern Brazil.

FSU-WESTERN

Arctic air settled into the region, with temperatures averaging 5 to 10 degrees C below normal in nearly all winter grain areas. By week's end, lows of -20 to -30 degrees C were common at most locations. A variable snow cover offered adequate protection from the bitter cold at most locations, but a patchy layer in northern Ukraine raised concern for winter grains. Precipitation, mostly snow, was light (5 mm or less) in Russia, Belarus, and Ukraine and moderate (5-25 mm) in sections of the Baltics. Moderate to heavy (25-50 mm or greater) precipitation fell in North Caucasus, some of which resulted in heavy snow.

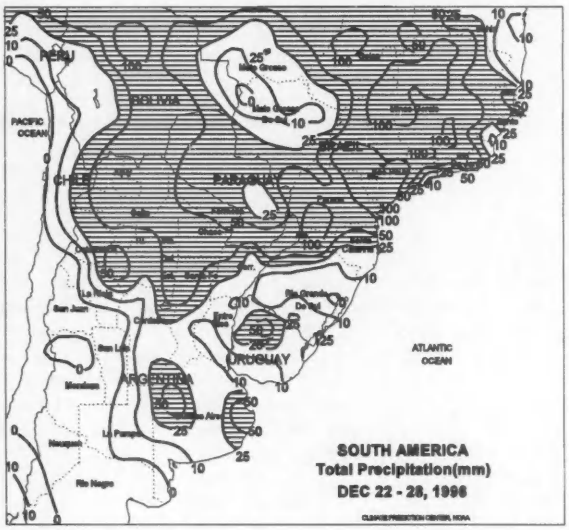
EUROPE

Unseasonable cold (temperatures 4-10 degrees C or more below normal) continued to dominate a large portion of eastern and northern Europe. Precipitation was very light, but existing, variable snow cover offered some protection from the arctic blast. Lows reached -15 to -25 degrees C from eastern Germany eastward through Poland southward to Romania. In the south, warmer, wetter conditions prevailed across the Mediterranean countries. Rainfall totaled 10 to 25 mm or more across much of Spain, France, and Italy, providing adequate to abundant moisture for winter grain development. Sections of northern Italy remained excessively wet. Moderate precipitation (10-25 mm or more, exceeding 50 mm locally) fell throughout southeastern Europe.



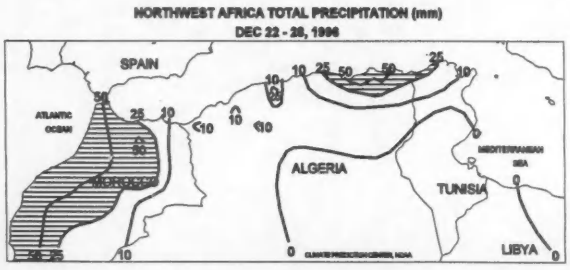
SOUTH AMERICA

In central Argentina, early-week, dry, warm weather (2-4 degrees C above normal; maximum temperatures 35-37 degrees C) favored winter wheat harvesting, especially in southern Buenos Aires. The warm weather also aided soybean and corn development. Later in the week, light to moderate rain (15-25 mm, with an isolated amount greater than 50 mm) slowed wheat harvesting but increased soil moisture for summer crops. Moderate showers (30-60 mm) fell across northern Argentina, increasing moisture supplies for cotton. As of December 20, reports indicated the following crop planting progress: corn, 87 percent; soybeans, 82 percent; sunflowers, 95 percent; sorghum, 82 percent; and cotton, 78 percent. Winter wheat harvesting was 53 percent complete. In southern Brazil, widespread showers (15-75 mm) covered the major soybean areas, maintaining adequate soil moisture levels. Heavier showers (100-160 mm) fell across western Minas Gerais, possibly causing some flooding.



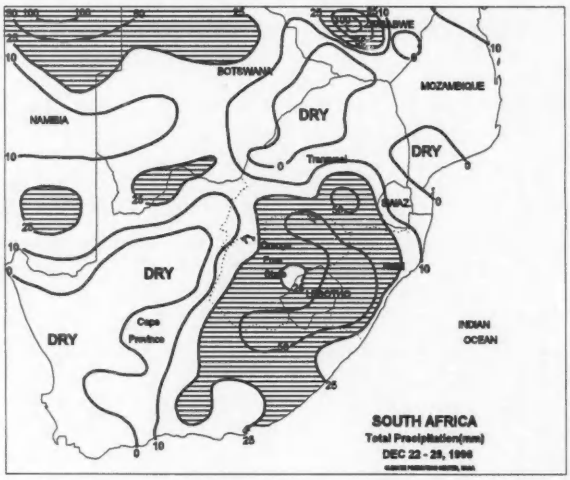
NORTHWESTERN AFRICA

Moderate to heavy rain (50-90 mm) again fell across Morocco, providing abundant moisture for germinating winter grains but causing some late-season planting delays and local flooding. To the east, moderate showers (20-50 mm, with isolated amounts greater than 75 mm near the coast) fell across the eastern half of Algeria and northern Tunisia, benefiting germinating winter grains. Western Algeria received light to scattered moderate rain (5-30 mm), where additional moisture is still needed. Temperatures averaged 2 to 4 degrees C above normal throughout the region.



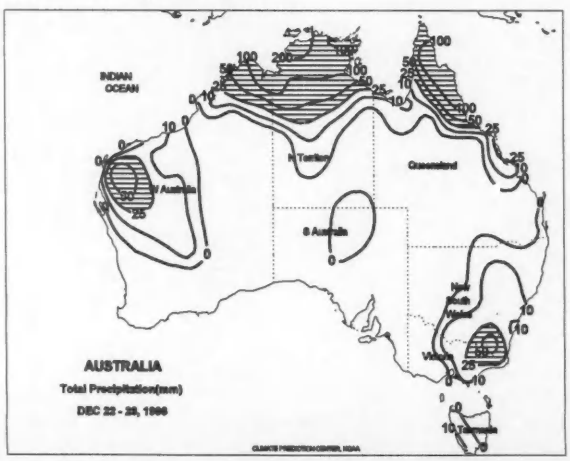
SOUTH AFRICA

Moderate to heavy showers (20-72 mm) covered a broad section of the central and eastern corn belt, maintaining generally favorable moisture levels for vegetative corn. Highs in the mid to upper 20's C accompanied the rain, favoring early development. Drier-than-normal conditions persisted, however, on the western fringe of the corn belt, with highs briefly hitting the middle 30's C. A soaking rain is needed in the far west to alleviate stress and prevent declines in yield potential. Elsewhere, light showers (25 mm or less) continued in coastal sugarcane areas of Kwazulu-Natal, but more moderate rain (16-47 mm) fell in crop areas of Eastern Cape.



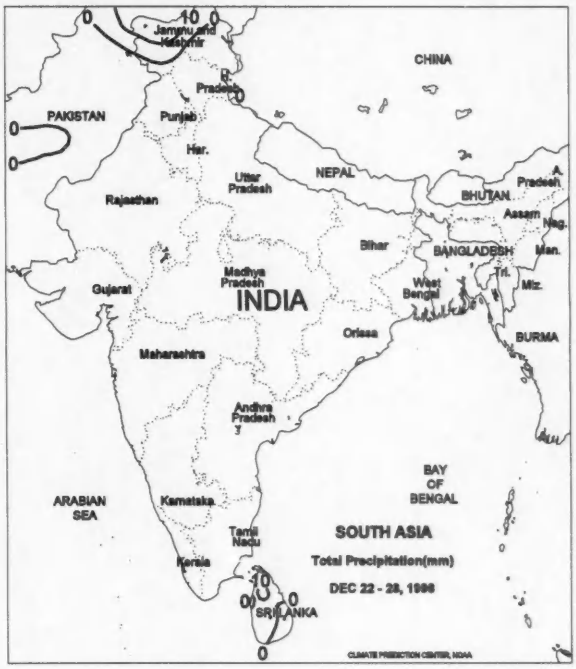
AUSTRALIA

Dry weather returned to the primary summer crop region (southern Queensland and northern New South Wales), spurring growth of sorghum and cotton. Despite the dryness, highs remained in the low to mid 30's C, limiting potential stress. An active monsoon across the north brought heavy rain (100 mm or more) to Queensland's northern sugarcane areas. Dryness in the western and southern winter grain belts favored final harvest efforts. In New Zealand, dry weather covered the main pasture areas.



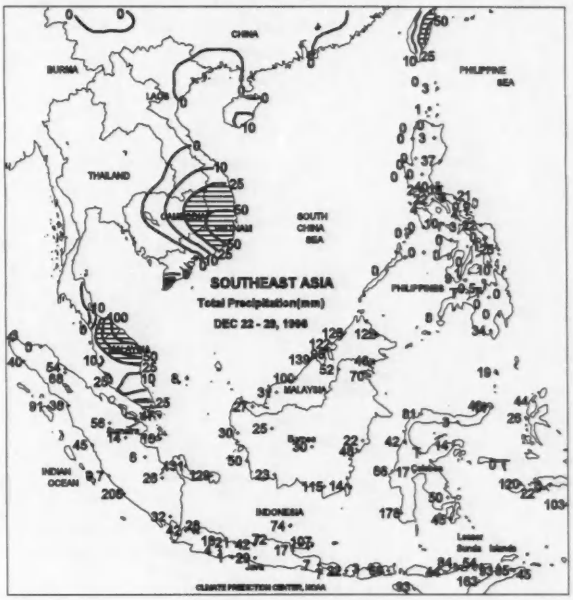
SOUTH ASIA

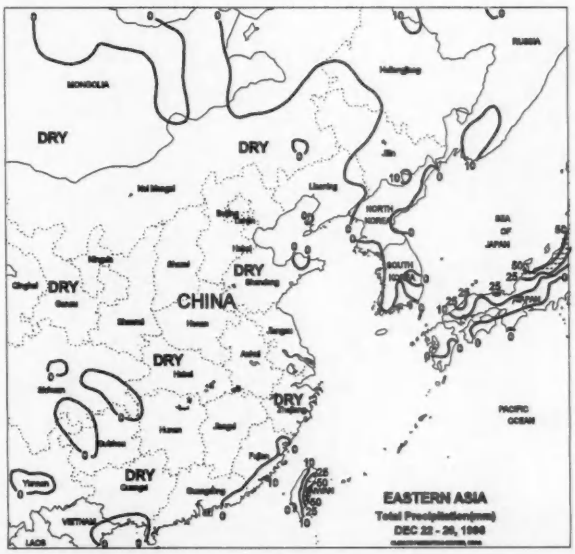
Dry weather over southern India brought some relief to flood-plagued rice in coastal areas of the southern tip. In fact, seasonable dryness dominated the entire South Asian region, favoring summer grain, oilseed, and cotton harvests. Near- to above-normal temperatures aided crop dry down. In the northwest, lows dipped below 5 degrees C over Pakistan and northernmost India.



SOUTHEAST ASIA

Somewhat drier weather (showers of 5-30 mm) covered Java, easing previous wetness. Drier weather prevailed across Indochina and the Philippines, easing flooding and aiding rice harvesting. Across the Malay Peninsula, light to moderate showers (10-60 mm, with isolated amounts greater than 100 mm) extended from extreme southern Thailand into Malaysia. Moderate showers (30-50 mm) were limited to south-central Vietnam, as the main rice areas were favorably dry. In the Philippines, light to moderate showers (5-40 mm) fell across southern Luzon, while dry weather prevailed elsewhere. Tropical Cyclone Greg hit northern Borneo on December 25 and 26, with sustained winds less than 40 knots (46 mph).





EASTERN ASIA

Persistent warm weather (4-6 degrees C above normal) has not allowed winter wheat to enter dormancy across the North China Plain. The continued mild weather leaves winter wheat vulnerable to potential extreme cold. Seasonably dry weather prevailed across China.

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(Continued from front cover)

Early in the week, warmth returned to the **South** and **East**, while an arctic cold front edged southward through the **Nation's mid-section**. On Sunday, **Ft. Smith, AR** registered a daily-record high of 73°F; a day later, **Houston, TX** logged 80°F. Warmth spread to the **East Coast** by Tuesday, propelling **Boston, MA** (61°F) to a daily record. Meanwhile in **North Dakota, Grand Forks'** high topped out at -13°F. The cold outbreak peaked across the **northern Plains** on December 25-26, producing more than a dozen daily-record lows. Lows on Wednesday dipped to -36°F in **Glasgow, MT** and -37°F in **International Falls, MN**. In contrast, **Nome, AK** registered a daily-record high of 36°F, helping to raise weekly temperatures 4 to 18°F above normal in far western and northern parts of the State. Daily records on Thursday included -34°F in **St. Cloud, MN**, -28°F in **Sheridan, WY**, and -5°F in **Goodland, KS**. A day later, however, highs quickly surged to daily-record levels on the **central and southern High Plains**, including 70°F in **Liberal, KS** and 75°F in **Midland, TX**. Warmth spread eastward at week's end, resulting in a daily-record high of 68°F in **Evansville, IN** and again boosting **Houston's** high to 80°F.

During the week, snowfall in **eastern Washington** totaled 15.4 inches in **Yakima** and 12.4 inches in **Spokane**. **Yakima** tallied a daily-record low (-7°F) on December 28, and achieved a 27-inch snow depth by Sunday morning (December 29), breaking their all-time record of 22 inches, set on December 21, 1964. Elsewhere in the **interior Northwest**, weekly snowfall included 32.7 inches in **Missoula, MT** and 9.7 inches in **Pendleton, OR**. Farther east, several disturbances lifted **Midwestern** totals to 12.9 inches in **Green Bay, WI**, 9.3 inches in **Minneapolis, MN**, and 7.0 inches in **Dubuque, IA**. In **Michigan, Marquette's** weekly total, enhanced by lake-effect squalls, was 25.0 inches. Similarly, totals reached 7.7 inches at both **Erie, PA** and **Buffalo, NY**. Farther south, weekly rainfall topped 2 inches in a few spots from Louisiana to the lower Ohio Valley, including **New Orleans, LA** and **Memphis, TN**. Heavy rain also soaked **Hawaii's Maui County** early in the week, totaling nearly 4 inches in **Kahului**.

In **Portland, OR**, where an annual rainfall record was eclipsed on December 4, a monthly rainfall record was established on December 29, breaking their 1968 standard of 11.12 inches. Elsewhere in **Oregon**, annual rainfall records were shattered at week's end in **Medford** (30.15 inches in 1983), **Salem** (63.50 inches in 1937), and **Astoria** (87.39 inches in 1968). **Astoria's** December record (16.57 inches in 1955) also fell by the wayside. Farther south, **Blue Canyon, CA** received another 10.92 inches of precipitation--60 percent of which fell in 48 hours on December 25-27--increasing their December total to 37.02 inches. Nearly 3 inches of new rainfall padded **Eureka's** 16.96-inch monthly total. Heavy snow fell as far east as **western Colorado**, where the snow depth at **Wolf Creek Pass** stood at 78 inches on December 28, up from 45 inches a week earlier.

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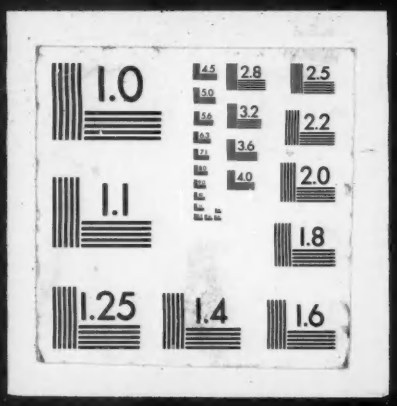
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